

DEPARTMENT OF BUILDING AND DEVELOPMENT

COUNTY OF LOUDOUN

MEMORANDUM

DATE: October 5, 2007

TO: Marchant Schneider, Planning Project Manager

FROM: Laura Edmonds, Environmental Engineer

THROUGH: William Marsh, Environmental Review Team Leader

SUBJECT: SPEX-2007-0021 Route 50 Medical Campus



The Environmental Review Team (ERT) reviewed the subject application during the September 4, 2007, ERT Meeting. Our comments pertaining to the current application are as follows:

Regarding streams and wetlands

- 1) The Army Corps of Engineers issued Jurisdictional Determination #06-B0037 on March 21, 2006, confirming a wetland delineation performed by Wetland Studies and Solutions for the project. Please provide a note on Sheet 1 referencing the approved Jurisdictional Determination as the source of the wetlands information depicted on the plan (e.g., Jurisdictional waters and wetlands depicted on the plan were delineated by Wetlands Studies and Solutions and confirmed by Army Corps of Engineers Jurisdictional Determination #06-B0037, issued on March 21, 2006).
- 2) Impacts are proposed to all jurisdictional waters and wetlands on the property, totaling approximately 0.3 acres. Staff emphasizes the importance of mitigating wetland and stream impacts close to the impact area to help maintain water quality and flood protection functions, as well as habitat. Therefore, where such impacts are deemed unavoidable, staff recommends a commitment be provided to prioritize the mitigation as follows: 1) within the Broad Run Watershed within the same Loudoun County geographic Policy Area, 2) within the Broad Run Watershed within another Loudoun County geographic Policy Area, or 3) elsewhere within Loudoun County, subject to approval by the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality. This approach is consistent with Policy 23 on Page 5-11 of the RGP, which states that "the County will support the federal goal of no net loss to wetlands in the County." Furthermore, the County's strategy is to protect its existing green infrastructure elements and to recapture elements where possible [RGP, Page 6-8, Green Infrastructure Text].

Regarding forest resources

- 3) Staff recommends that existing vegetation located within the setback from Route 50 be preserved within a Tree Conservation Area and that the applicant provide a commitment incorporating the suggested Tree Conservation Area language approved by the County Urban Forester (attached). Staff further recommends that the applicant consult with the project arborist regarding the removal of Virginia Pine from this area.

Regarding stormwater management

- 4) One Stormwater Management (SWM)/Best Management Practice (BMP) facility (a dry pond) is depicted in the southwest corner of the site. While approximately half of the site drains toward the planned facility, the other half of the site drains into a forested wetland on the adjacent property that is being preserved in conjunction with the Glascock Field at Stone Ridge application (ZMAP-2006-0007). The Surface Water Policies within the RGP support the implementation of Low-Impact Development (LID) techniques (Page 5-17). Therefore, staff encourages the applicant to honor existing drainage divides and maintain hydrology to the offsite forested wetland by providing SWM/BMP facilities in the northern portion of the site, in addition to the facility currently shown. Staff further recommends that the dry pond currently proposed be converted to a wet pond to improve pollutant removal. SWM/BMP facilities located within the 100-foot Buffer Yard adjacent to Route 50 are required to have a "permanent aqueous element," as outlined in Section 5-1414B(5) of the Revised 1993 Zoning Ordinance.

Regarding noise impacts

- 5) Given the proposed hospital use and the need for overnight accommodations similar to residential uses, the proximity of the proposed hospital to Route 50 (a planned Principal Arterial), and the location of the proposed facility within the Ldn 60 airport noise buffer, staff recommends that a commitment be provided to perform a traffic noise study and a building shell analysis prior to occupancy to ensure that interior noise levels do not exceed 45 decibels consistent with the Noise Policies of the Revised Countywide Transportation Plan (Page 4-7) and the Airport Noise Policies of the Revised General Plan (Page 5-46). Sample commitment language is provided as an attachment to this referral.

Regarding green building practices

- 6) Staff encourages a commitment in the design of the proposed hospital to Leadership in Energy and Environmental Design (LEED) standards, as supported by the United States Green Building Council. LEED recognizes site sustainability, conservation of energy and water, and indoor air quality, among other goals. The Revised General Plan also encourages these goals in the General Water Policies supporting long-term

water conservation (Policy 1, Page 2-20); the Solid Waste Management Policies supporting waste reduction, reuse, and recycling (Policy 2, Page 2-23); and the Air Quality Policies supporting the creation of pedestrian and bicycle facilities (Policy 1, Page 5-41). Furthermore, the County encourages project designs that ensure long-term sustainability, as discussed in the Suburban Policy Area, Land Use and Pattern Design text (Page 6-2).

The new Rockingham Memorial Hospital, under construction in Rockingham County, Virginia, is being built to green standards, consistent with LEED and may be a useful reference for incorporating green building practices into the proposed project. The Rockingham Memorial Hospital project benefits from green building standards that encourage indoor air quality, alternative energy sources, and construction materials that are either recycled from existing structures or purchased from nearby sources. Additional information is available on the Rockingham Memorial Hospital website at: http://www.rmhonline.org/destinationhealth/building_green.html.

Due to the scope of the comments provided, staff requests an opportunity to comment on the subsequent submission of this application. Please contact me if you need any additional information.

Sample Tree Conservation Area Commitment Language:

Tree Conservation Areas. Within the areas identified on the Concept Development Plan (CDP) as "Tree Conservation Areas," the Owner shall preserve healthy trees provided, however, that trees may be removed to the extent necessary for the construction of trails and Stormwater Management Facilities that are required pursuant to the proffers and/or shown on the approved construction plans and profiles as lying within such Tree Conservation Areas and for the construction of utilities and noise attenuation measures necessary for development of the Property. A minimum of eighty (80) percent of the canopy within the cumulative Tree Conservation Area depicted on the CDP will be preserved, exclusive of stands of Virginia Pine over 25 years in age. In the event that the eighty (80) percent canopy threshold cannot be achieved within the designated Tree Conservation Areas, such lost canopy will be recaptured elsewhere onsite in locations to be designated at the discretion of the Owner in consultation with the County. Boundaries of all Tree Conservation Areas shall be delineated on the record plat recorded for each section of the development.

If, during construction on the Property, it is determined by the Owner's certified arborist and/or the County that any healthy tree located within the boundaries of any of the Tree Conservation Areas described in this proffer has been damaged during construction and will not survive, then, prior to bond release on any section containing or immediately adjacent to a tree conservation area, the Owner shall remove each such tree and replace each such tree with two (2) 2½ - 3 inch caliper native, non-invasive deciduous trees. The placement of the replacement trees shall be proximate to the area of each such damaged tree so removed, or in another area as requested by the County.

The HOA documents shall include a provision that prohibits removal of trees in Tree Conservation Areas as shown on the record plat after construction has been completed by the Owner without specific permission of the County Forester except as necessary to accommodate Forest Management Techniques, performed by or recommended by a professional forester or certified arborist, that are necessary to protect or enhance the viability of the canopy. Such Management Techniques may include, without limitation, pruning and the removal of vines, invasive species, trees uprooted or damaged by extreme weather conditions, and trees or limbs that are diseased, insect-infested, dead, or are considered a hazard to life or property. The HOA documents shall clearly state that such provisions prohibiting tree removal shall not be amended by the Owner or the HOA without written approval from the County. The record plat for each portion of the Property containing a Tree Conservation Area shall contain a note stating that the removal of trees within a Tree Conservation Area is prohibited except in accordance with the Declaration of Covenants.

Sample Building Shell Analysis Commitment Language:

Acoustical treatment shall be provided for the hospital building to ensure interior noise levels do not exceed an average sound level of 45 dBA. A building shell analysis shall be performed and certified by a licensed acoustical engineer and submitted concurrent with the zoning permit application for the hospital building to ensure that the 45 dBA interior noise level is achieved. For the purpose of the analysis, exterior noise levels associated with airport noise shall be assumed to be 60 dBA and exterior noise levels associated with highway traffic noise shall be determined by a noise impact study to be completed in conformance with the related traffic study commitment.

Sample Noise Impact Study Commitment Language:

The applicant will provide a noise impact study to the County that will determine the need for any additional buffering and noise attenuation measures along Route 50 and the exterior noise level at the hospital footprint to be used in the hospital building shell analysis. The noise impact study shall be based upon traffic volumes for these roadways at a time 10-20 years from the start of construction based upon the most recent, applicable forecast available from the Office of Transportation Services, the ultimate road configuration as defined in the Revised Countywide Transportation Plan, and the ultimate design speed. This noise impact study will be conducted by a certified professional engineer and submitted to the County concurrently with the first site plan or construction plan, whichever is first in time. Noise impacts occur if noise levels substantially exceed the existing noise levels (a 10 decibel increase over existing levels) or approach (one decibel less than), meet, or exceed the Noise Abatement Criteria identified in the Revised Countywide Transportation Plan. For all impacted uses, noise attenuation measures shall be provided along the specified roadways sufficient to mitigate the anticipated noise impacts prior to the issuance of occupancy permits for any impacted structures. Noise attenuation shall result in noise levels less than impact levels (2 decibels less than the Noise Abatement Criteria) and shall result in a noise reduction of at least 5 decibels. Where noise attenuation measures are needed, priority shall be given to passive measures (to include adequate setbacks, earthen berms, wooden fences, and vegetation). Structural noise attenuation measures (e.g., noise walls) shall only be used in cases where the mitigation cannot otherwise be achieved.